

# SAIL & STUDY

Aboard The REGINA MARIS



The Ocean Research  
and Education Society, Inc.





**T**he Ocean Research and Education Society, Inc. is a non-profit, educational membership society, born from a conviction that knowledge and appreciation of the oceans and the fragility of its ecosystems must be vastly expanded if their enormous resources are to be conserved for future generations.

## What are our goals?

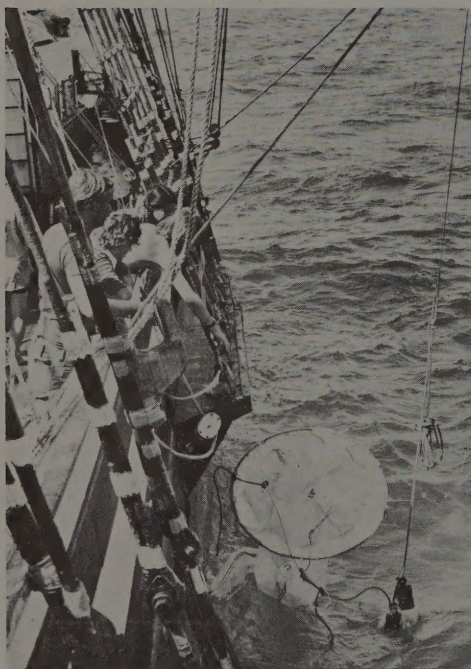
- (1) Conservation of the ocean environment
- (2) Generation of new knowledge of ocean ecosystems
- (3) Creation of a constituency concerned with the oceans and the problems of their preservation

## How are these goals being pursued?

To realize its goals, the Society has undertaken a program of combined research and teaching in open ocean ecology currently focused on cetacea—whales and dolphins. This focus was chosen because whales are the top of their food chain; there are huge gaps in our knowledge of their biology; they are an excellent example of what happens to a group of animals when man is allowed to prey upon them without control; and there is much public interest in their fate to which romance, their majestic bulk, and a feeling of kinship to these seemingly highly intelligent animals all contribute.

## Research

The research generally focuses on cetacean populations on which little research has been done to date and where knowledge is needed immediately for their protection.



Students learn methods of collecting and quantifying plankton samples in studying whale habitats. (Photo: K. Balcomb)

Currently, it is concerned with the relative abundance, migratory pattern and ecology of the great whales—fin, humpback, right, sperm, gray and blue—and some of the lesser whales—porpoise, dolphin and bottle-nosed whale. Other marine mammals—sea lion, seal and walrus—are observed and studied as time and opportunity permit. Efforts are being made to define habitats by correlating the presence of the species of animals being studied with ecological features such as plankton, fish, and physical and chemical characteristics of the water column. Photographic and acoustic data are collected and used to identify individual animals, to study their behaviour and to follow their migrations. Research is directed by Dr. George Nichols, Jr., the Ocean Research and Education Society's scientific staff and visiting scientists. Students are an integral part of the team, assisting in the collection of primary data and the initial analysis of the findings.

## Education

Two courses are offered aboard *r/v REGINA MARIS* on each expedition—Marine Mammal Biology and Celestial Navigation. These provide the student with a keener insight into the research projects with which he is assisting and to enhance his knowledge of seamanship by being taught the skill of using celestial navigation to determine his precise position at sea. Academic credit is available upon successful completion of the courses provided.

The main goals of the Marine Mammal Biology course are (1) to introduce each student, either novice or well-versed in the biological sciences, to the field of marine mammalogy, (2) to instruct students in the biology and physiology of marine mammals and the historical relationship, both past and present, between man and cetacean and (3) to equip each student with the basic skills necessary to identify and to examine the marine mammals they will observe and study during the course of the expedition. The course is taught by the ORES scientific staff and visiting scientists.

The course in Celestial Navigation is designed to instruct the students in the particulars of this age-old science and to enable the students to plot the ship's course on the open ocean, relying only upon sextant, chronometer, the sun and stars. Students who successfully pass the course take with them a skill that can prove useful, often invaluable, for many years to come.

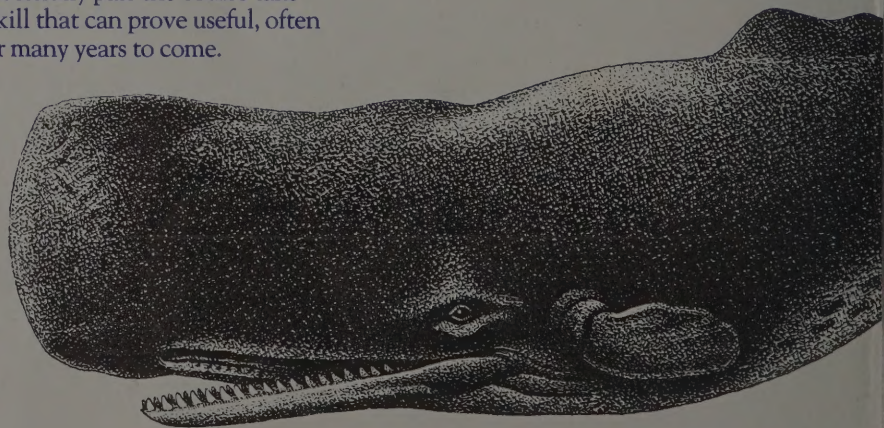


Photo: Henk Van Beever

## The Vessel

*r/v REGINA MARIS*, a 144 foot three-masted barquentine, is the Society's primary research vessel. Other vessels are chartered as needed for specific expeditions. A sailing ship such as *r/v REGINA MARIS* is particularly well-suited for whale and other cetacean research because her masts provide the high platforms needed to spot and observe whales and dolphins at sea. Her ability to run silent under sail makes possible the recording of whale sounds without contamination from propeller and engine noise and a sailing ship's stability at sea greatly facilitates the collection and laboratory examination of plankton, fish, water samples, et cetera.

*r/v REGINA MARIS* is in Lloyd's Class 100 A-1, which means that she is extremely well-found and seaworthy. She accommodates 37 austere. She has a large on-deck laboratory—a dry lab for electronic equipment and a wet lab for sampling gear, and a darkroom for on-the-spot development of photographic data.





## The People

The scientists, *r/v REGINA MARIS* crew members and administrative staff who make up the core of the Ocean Research and Education Society, Inc. are not only highly skilled and qualified in their respective fields of endeavour, but are also dedicated and wholeheartedly committed to the goals of the Society.

DR. GEORGE NICHOLS, JR., President of the Society and Master of *r/v REGINA MARIS*, founded the Society in 1975. The education and research programs of the Society are under his direct supervision and he is the chief instructor in the Celestial Navigation course on board. Dr. Nichols has written numerous articles about his many ocean voyages for *SAIL* magazine and for *OCEANS*, the magazine of the Oceanic Society. With Ken Balcomb and Hal Whitehead, Dr. Nichols has also authored several scientific reports on the data compiled aboard *r/v REGINA MARIS* on Western North Atlantic humpback whale (*Megaptera novaeangliae*) behaviour and migration patterns.

KENNETH C. BALCOMB III, Chief Scientist of the Society, has been actively engaged in cetacean research for over 15 years. He founded the Moclips Cetological Society and is a member of the American Society of Mammologists. For the past three years, Ken has run a research program, *ORCA SURVEY*, in the Strait of Juan de Fuca, the San Juan Islands and Puget Sound in Washington state to study the populations of killer whales (*Orcinus orca*). Ken has been aboard *r/v REGINA MARIS* on several expeditions conducting research in Newfoundland and Labrador on humpback whale feeding behaviour and in the Caribbean on the banks off Hispaniola on humpback whale breeding and calving behaviours. Ken is presently a doctoral candidate at the University of California—Santa Cruz, under the supervision of Dr. Kenneth S. Norris.



Sperm Whale  
*Physeter catodon*

## Tuition

Tuitions are based on the actual costs of operation and vary from expedition to expedition, depending upon duration and the availability of research support. They presently average \$500 per week.

Some scholarship aid is available for highly deserving and qualified students. Adjustments in the tuition may be made when research grants and donations partially cover the operational costs of an expedition.

## Membership

Membership is open to all interested in participating in the Society's work and contributing to its support. The classes of membership are:

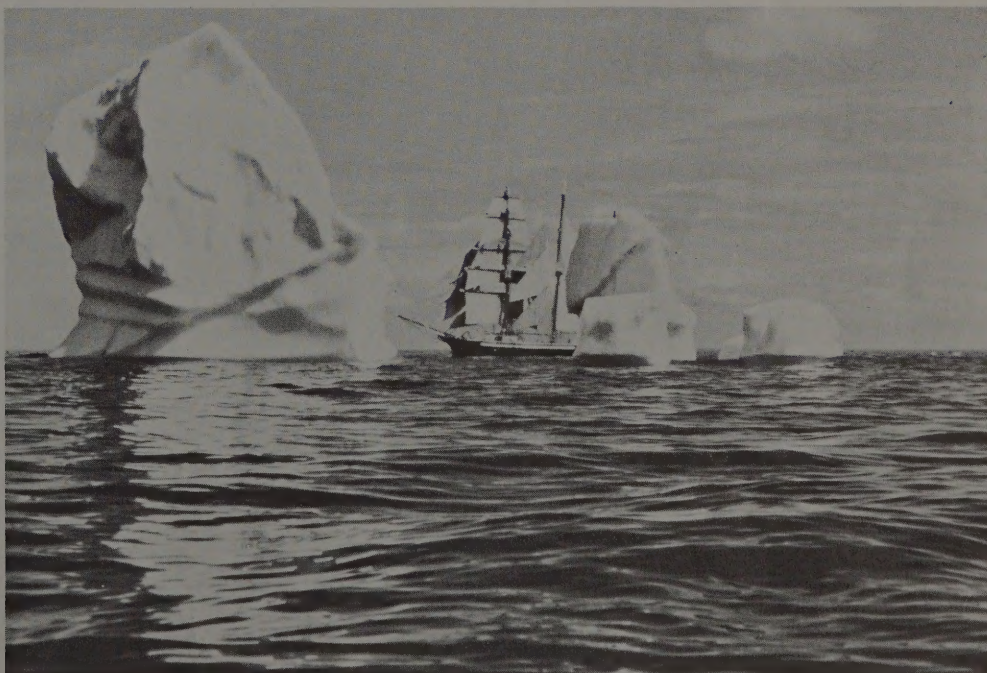
Member	\$ 25.00
Sustaining Member	50.00
Supporting Member	100.00
Donor	500.00
Fellow	1,000.00
Corporate	5,000.00
Patron	10,000.00
Founder	50,000.00

Members are always welcome aboard the ship whenever she is in port. They are invited for a day-sail once or twice a year and they can participate vicariously in the Society's programs of research and education through our weekly newsletter, *SEARCHLIGHT*, and in the other ways as time, inclination, talent and skill allow. Fellows, Corporates, Patrons and Founders may be invited to sail aboard on an expedition as



Dr. Sylvia Earle and scientist Ken Balcomb recording humpback whale "songs" off Bermuda. (Photo: Al Giddings)

space allows and are eligible for a 10% discount on the tuition of any expedition on which they choose to go. All contributions are tax deductible.



Newfoundland, Summer of 1977.  
(Photo: G. Nichols, Jr.)





**The Ocean Research  
and Education Society, Inc.**

51 Commercial Wharf #6  
Boston, Massachusetts 02110  
(617) 523-3455

**Directors**

George Nichols, Jr., M.D., *President*  
William Davidson, M.D.  
Bernard A. Goldhirsh  
Paul A. Pennoyer, Jr.  
Gratia R. Waters

**Science Advisory Board**

Kenneth S. Norris, *Chairman*  
Professor of Natural History  
University of California, Santa Cruz

George P. Fulton  
Associate Director  
Commission of Higher Education  
State of South Carolina

Roger S. Payne  
Research Zoologist  
New York Zoological Society  
Affiliate Associate Professor  
Rockefeller University

John J. Prescott  
Director  
New England Aquarium  
William E. Schevill  
Associate in Mammology  
Museum of Comparative Zoology  
Harvard University  
Woods Hole Oceanographic Institution  
Leonard P. Savignano  
Director  
Center of International Education  
Massachusetts State Colleges

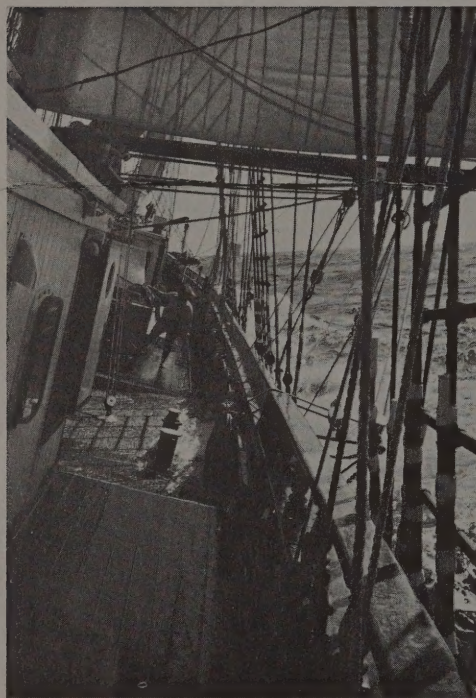


Photo: George Nichols, Jr.



Photo: Henk Van Beever

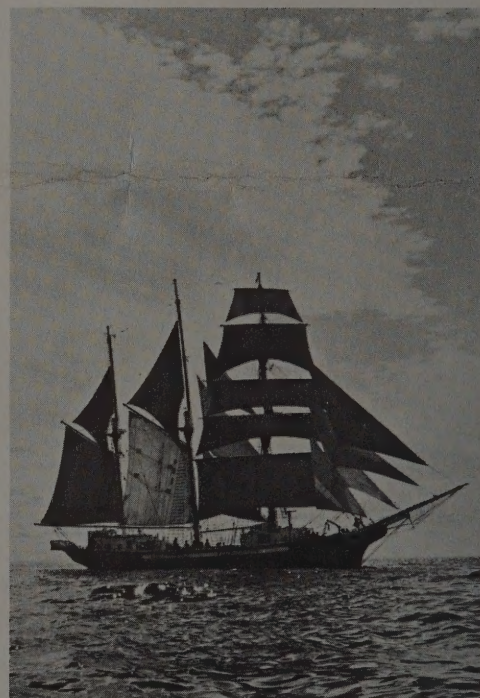


Photo: Martin B. Offenhauer



Photo: Ken Balcomb



Photo: Camille Goebel

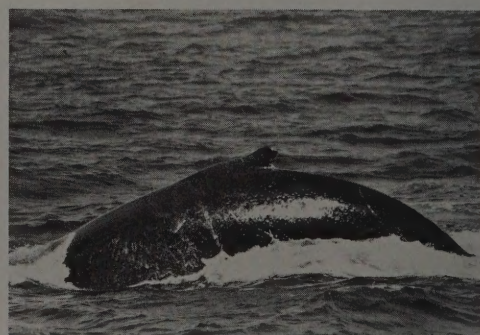


Photo: Ben Baxter